Int. Appln. No.:PCT/US04/024052
US Appln. No.: 10/566,235
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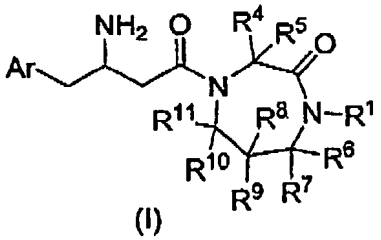
Listing of Claims:

1. (original) A compound of the formula I:



(I)

or a pharmaceutically acceptable salt thereof; wherein
each n is independently 0, 1, or 2;

Ar is phenyl substituted with one to five R^3 substituents;

R^1 is selected from the group consisting of
hydrogen,

C_{1-10} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, CN, hydroxy, R^2, OR^2, $NHSO_2R^2$, $NR^2SO_2R^2$, SO_2R^2, CO_2H, and C_{1-6} alkyloxycarbonyl,

$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

each R^3 is independently selected from the group consisting of
hydrogen,
halogen,
cyano,
hydroxy,
C_{1-6} alkyl, unsubstituted or substituted with one to five halogens,
C_{1-6} alkoxy, unsubstituted or substituted with one to five halogens,
carboxy,
alkoxycarbonyl,
amino,
NHR^2,
NR^2R^2,
$NHSO_2R^2$,
$NR^2SO_2R^2$,
$NHCOR^2$,
NR^2COR^2,
$NHCO_2R^2$,
$NR^2CO_2R^2$,
SO_2R^2,
SO_2NH_2,
SO_2NHR^2, and
$SO_2NR^2R^2$;

each R^2 is independently C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, CO_2H, and C_{1-6} alkyloxycarbonyl;

R^4, R^6, and R^{10} are each independently selected from the group consisting of:
hydrogen,
cyano,
carboxy,
C_{1-6} alkyloxycarbonyl,
C_{1-10} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_nCONR^{12}R^{13}$, wherein R^{12} and R^{13} are independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; or wherein R^{12} and R^{13} together with the nitrogen atom to which they are attached form a heterocyclic ring selected from azetidine, pyrrolidine, piperidine, piperazine, and morpholine wherein said

heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;

and wherein any methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

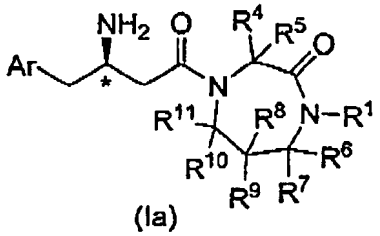
R^8 is selected from the group consisting of halogen, hydroxy, and R^4;

R^5, R^7 and R^{11} are each independently hydrogen or C_{1-6} alkyl; or wherein R^7 and R^1 together with the nitrogen atom to which R^1 is attached form a heterocyclic ring selected from azetidine, pyrrolidine and piperidine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

R^9 is selected from the group consisting of hydrogen, hydroxy, halogen, or C_{1-6} alkyl;

with the proviso that at least one of R^6, R^7, R^8 and R^9 is not hydrogen.

2. (original) The compound of Claim 1 of the formula Ia:



(Ia)

wherein the carbon atom marked with an * has the *R* configuration.

3. (original) The compound of Claim 1 wherein R^3 is selected from the group consisting of hydrogen, fluoro, chloro, bromo, trifluoromethyl, and methyl.

4. (original) The compound of Claim 3 wherein R^3 is hydrogen, chloro, or fluoro.

5. (original) The compound of Claim 1 wherein R^1 is selected from the group consisting of

hydrogen,

C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens, and

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

6. (original) The compound of Claim 5 wherein R^1 is selected from the group consisting of hydrogen, methyl, and cyclopropyl.

7. (original) The compound of Claim 6 wherein R^1 is hydrogen.

8. (original) The compound of Claim 1 wherein R^4 is selected from the group consisting of:

hydrogen,

C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6}

alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

9. (original) The compound of Claim 8 wherein R^4 is selected from the group consisting of:

hydrogen,
CH_3,
CH_2CH_3,
CH_2CF_3,
CH_2(2-pyridyl),
CH_2Ph,
CH_2(2-F-Ph),
CH_2(2-Me-Ph), and
CH_2(2-CF_3-Ph).

10. (original) The compound of Claim 1 wherein R^6 is selected from the group consisting of:

hydrogen,
C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, C_{1-6} alkyl, and C_{1-6}

alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein any methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

11. (original) The compound of Claim 10 wherein R^6 is selected from the group consisting of:

hydrogen,

C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens, and

$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

wherein methylene (CH_2) carbon atom in $(CH_2)_n$ is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens.

12. (original) The compound of Claim 11 wherein R^6 is selected from the group consisting of:

hydrogen,

CH_3,

CH_2CH_3,

CF_3,

CH_2Ph, and

CH_2(2-F-Ph).

13. (original) The compound of Claim 1 wherein R^8 is selected from the group consisting of:

hydrogen,

hydroxy,

halogen, and

C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens.

14. (original) The compound of Claim 13 wherein R^8 is hydrogen.

15. (original) The compound of Claim 1 wherein R^{10} is selected from the group consisting of:

hydrogen, and

C_{1-6} alkyl, unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkoxy, carboxy, C_{1-6} alkyloxycarbonyl, and phenyl-C_{1-3} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens.

16. (original) The compound of Claim 15 wherein R^{10} is hydrogen.

17. (original) The compound of Claim 1 wherein R^5, R^7 and R^{11} are each independently selected from hydrogen and methyl.

18. (original) The compound of Claim 17 wherein R^5, R^7 and R^{11} are hydrogen.

19. (original) The compound of Claim 1 wherein R^9 is selected from hydrogen, halogen and methyl.

20. (original) The compound of Claim 19 wherein R^9 is hydrogen.

21. (original) The compound of Claim 19 wherein R^9 is methyl and R^5, R^7, R^8, R^{10}, and R^{11} are hydrogen.

22. (original) The compound of Claim 21 wherein R^4 is selected from the group consisting of:

hydrogen,
CH_3,
CH_2CH_3,
CH_2CF_3,
CH_2(2-pyridyl),
CH_2Ph,
CH_2(2-F-Ph),
CH_2(2-Me-Ph), and
CH_2(2-CF_3-Ph).

23. (original) The compound of Claim 1 wherein R^5, R^7, R^8, R^9, R^{10}, and R^{11} are hydrogen, with the proviso that R^6 is not hydrogen.

24. (original) The compound of Claim 23 wherein R^4 is selected from the group consisting of:

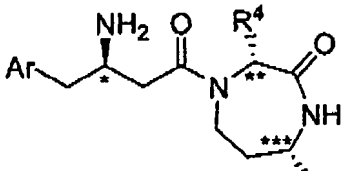
hydrogen,
CH_3,
CH_2CH_3,
CH_2CF_3,
CH_2(2-pyridyl),
CH_2Ph,
CH_2(2-F-Ph),
CH_2(2-Me-Ph), and
CH_2(2-CF_3-Ph); and

R^6 is selected from the group consisting of:

CH_3,
CH_2CH_3,
CF_3,
CH_2Ph, and
CH_2(2-F-Ph).

25. (original) The compound of Claim 24 wherein R^1 is hydrogen.

26. (original) The compound of Claim 25 wherein the stereogenic carbon atoms marked with an ** and an *** have the stereochemistry as depicted in formula Ib:



(Ib)

27. (original) The compound of Claim 1 wherein R^7 and R^1 together with the nitrogen atom to which R^1 is attached form a heterocyclic ring selected from azetidine, pyrrolidine and piperidine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens.

28. (original) The compound of Claim 27 wherein R^7 and R^1 together with the nitrogen atom to which R^1 is attached form a pyrrolidine ring.

29. (original) The compound of Claim 28 wherein R^4 is selected from the group consisting of:

hydrogen,
CH_3,
CH_2CH_3,
CH_2CF_3,
CH_2(2-pyridyl),
CH_2Ph,
CH_2(2-F-Ph),
CH_2(2-Me-Ph), and
CH_2(2-CF_3-Ph).

30. (original) A compound selected from the group consisting of:

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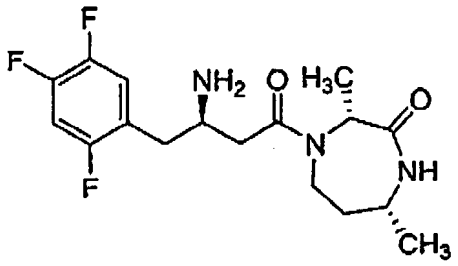
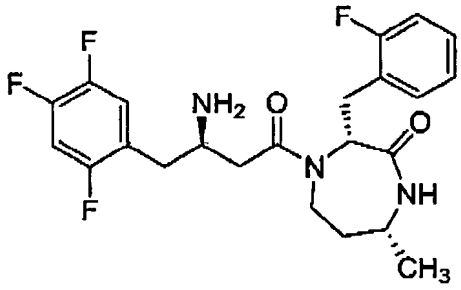
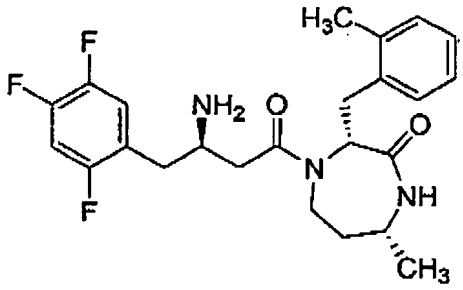
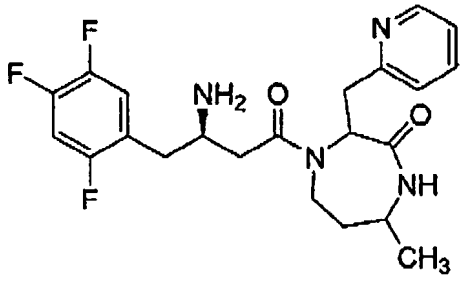
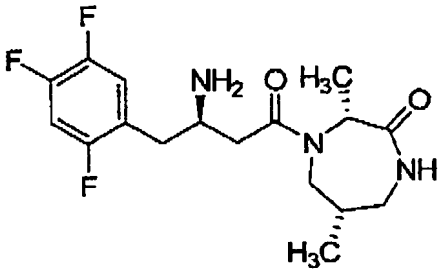
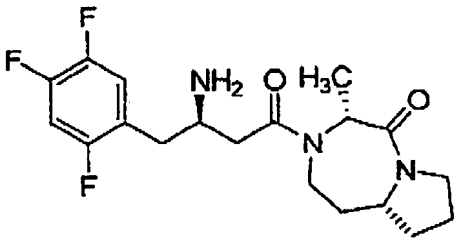


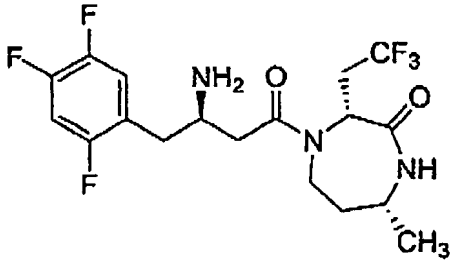




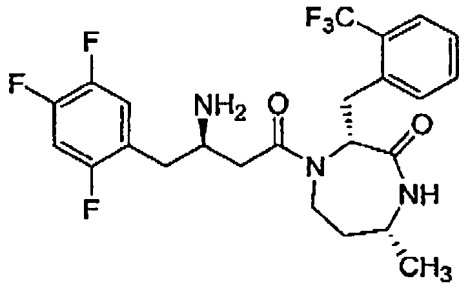








and



;

or a pharmaceutically acceptable salt thereof.

31. (original) A pharmaceutical composition which comprises a compound of Claim 1 and a pharmaceutically acceptable carrier.

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32. (previously amended) A method of treating Type 2 diabetes in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

33-34. (previously cancelled)